

The opinion in support of the decision being entered today was not written for publication and is not binding precedent of the Board.

Paper No. 22

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte YASUHIRO UCHIDA,
TAKASHI KOJIMA,
MASAHIRO HAMAYA,
and
MINORU OTA

Appeal No. 1999-0555
Application No. 08/593,330

HEARD: NOVEMBER 29, 2001

Before GARRIS, LIEBERMAN, and TIMM, Administrative Patent Judges.

GARRIS, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on an appeal from the refusal of the examiner to allow claims 1-11 as amended subsequent to the final rejection. These are all of the claims in the application.

The subject matter on appeal relates to an oxygen concentration detector. With reference to the appellants'

drawing, the detector includes an outer electrode 23, a heater 31, a protecting cover 16 having first and second levels of multiple openings 161 and 162 and wherein the relationship between the length L_1 of the heat generating part of the heater and the distance L_2 between the first and second levels of multiple openings is such that 0.9 is less than or equal to L_1/L_2 which in turn is less than or equal to 1.3. Further details of this appealed subject matter are set forth in representative independent claim 1 which reads as follows:

1. An oxygen concentration detector comprising:
 - a) an oxygen concentration sensing element comprised of a solid electrolyte and an outer electrode provided on the external surface of said solid electrolyte for contributing to detecting the concentration of oxygen in a gas to be measured;
 - b) a heater disposed near said solid electrolyte for heating said solid electrolyte, said outer electrode being located within the range defined by the length of the heat-generating part of said heater, in the direction of the length of said sensing element; and
 - c) a protecting cover separated from said sensing element and extending to cover its exterior for protecting said sensing element, said protecting cover having a first level and a second level of multiple openings in the lengthwise direction, said first and second levels of multiple openings being located outside of the range corresponding to said outer electrode in the direction of the length of said sensing element, there being no openings in said protecting cover in the range

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corresponding to said outer electrode, said first level of openings being openings which are nearest to an end of said outer electrode and said second level of openings being openings which are nearest to the opposite end of said outer electrode;

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wherein the relationship between the length L_1 of said heat-generating part and the distance L_2 , in the direction of the length of said sensing element, between the edge, on the side of the openings of the second level, of the openings of said first level and the edge, on the side of the openings of the first level, of the openings of the second level, is such that $0.9 \leq L_1/L_2 \leq 1.3$ is satisfied.

The references relied upon by the examiner's evidence of obviousness are:

Yamada 1985	4,505,807	Mar. 19,
Kato et al. (Kato) 1985	4,512,871	Apr. 23,
Yamakawa et al. (Yamakawa) 1986	4,569,748	Feb. 11,
Raff et al. (Raff) 1988	4,756,885	Jul. 12,
Ichikawa et al. (Japanese '848) 1988	63-180848	Jul. 25,

(published Japanese Kokai Patent Application)

Claims 1-5, 7, 8, 10 and 11 are rejected under 35 U.S.C. § 103 as being unpatentable over the Japanese '848 reference in view of Yamada or Kato, and claims 6 and 9 are correspondingly rejected over these references and further in view of Yamakawa and Raff respectively.

We refer to the brief and reply brief and to the answer for a complete discussion of the opposing viewpoints expressed by the appellants and by the examiner concerning the above-

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noted rejections.

OPINION

These rejections cannot be sustained.

The examiner acknowledges that the Japanese '848 reference contains no disclosure of the here-claimed L1/L2 ratio. According to the examiner, however, Yamada or Kato would have suggested locating the heat generating portion of the heater in the Japanese '848 detector in such a manner that the ratio requirement of the appealed claims would be satisfied. On page 7 of the answer, the examiner expresses his position concerning this matter with the following language:

Appellant's [sic, Appellants'] range of ratios goes from 0.9 to 1.3. The limits of this range therefore do not stray far from 1. When the heat generating portion of the heater in [Japanese '848] is located at its lower end, as is obviously suggested by Yamada or Kato, its length would inescapably correspond with the distance between the two levels of openings in the protecting cover (thereby meeting appellant's [sic, appellants'] recited range). In order not to be within appellant's [sic, appellants'] range, the heat generating portion would have to extend substantially beyond or short of the distance between the two levels of openings. This would mean a heater either with such a large heat generating portion as to be wasteful or with such a small heat generating portion as to be impractical. Neither makes any sense.

The fatal deficiency of the examiner's position is that it is not supported by the applied reference evidence. As acknowledged by the examiner, the Japanese '848 reference contains no disclosure regarding the disposition and length of the heat generating portion relative to the first and second levels of multiple openings. On the other hand, neither Yamada nor Kato contains any teaching or suggestion of first and second levels of multiple openings. Instead, the detectors disclosed in these references employ elongated slots as correctly pointed out by the appellants. Moreover, the examiner points to nothing in these last-mentioned references which would have suggested locating and sizing the heat generating part of a detector heater between first and second levels of multiple openings as discussed in the above-quoted portion of the answer.

In an attempt to support his obviousness conclusion, the examiner also argues that "[l]ocating the heat generating portion adjacent the electrodes would be [sic, would have been] obvious because that is where the electrodes are" (answer, page 8). As a matter of clarification, we point out that the heat generating part of Yamada's heater appears to

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surround his electrode and that the disposition of Kato's heat generating part relative to his electrode is not clearly disclosed. In any event, the examiner's aforementioned argument begs the issue of obviousness with respect to the ratio feature claimed by the appellants.

This is because it simply cannot be determined from the applied reference teachings whether this ratio would or would not be obtained in "[l]ocating the heat generating portion adjacent the electrodes."

Under these circumstances recounted above, it is our determination that the examiner's Section 103 rejection based on the Japanese '848, Yamada and Kato references is premised upon impermissible hindsight wherein that which only the inventor has taught is used against its teacher. W.L. Gore & Assocs. v. Garlock, Inc., 721 F.2d 1540, 1553, 220 USPQ 303, 312-13 (Fed. Cir. 1983), cert. denied, 469 U.S. 851 (1984). For this reason and because the above discussed deficiencies of these references are not supplied by the other references applied by the examiner, we cannot sustain any of the rejections before us on this appeal.

The decision of the examiner is reversed.

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REVERSED

BRADLEY R. GARRIS)	
Administrative Patent Judge)	
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)	BOARD OF PATENT
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